

Written testimony of Charles F. McMillan
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To the New Mexico Legislature Interim Committee on Science,
Technology, and Telecommunications

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INTRODUCTION

- Good afternoon, Mr. Chairman. It's my great pleasure to speak to the committee today. This is my first visit with you as Director and thank you for inviting me.
- I am Charles McMillan, the Director of Los Alamos National Laboratory. I was appointed in June of this year... and got to know some of you just a few weeks later when the Las Conchas Fire forced the closure of the Lab and the evacuation of Los Alamos.
- Since some of us have not met, I wanted to spend a moment on my background and experience.
 - Prior to becoming director, I was the Principal Associate Director for Weapons Programs at Los Alamos.
 - I began my career at Lawrence Livermore National Laboratory in 1983.
 - I have worked on the Advanced Supercomputing Program, I've been involved in the Stockpile Stewardship Program since its earliest days, and have managed experimental science facilities.
 - My undergraduate degrees were in mathematics and physics from Columbia Union College and my doctorate is in physics from the Massachusetts Institute of Technology.
- We have submitted information packets, and with your permission, I would like to take a few minutes to just talk with you about three things:
 - First, I'd like to give you an update on the Lab as it relates to economic impact in the region

- Then, in response to your questions about the demographics of the Lab's workforce, I have some information to share. I will also talk about what we're doing to strengthen the workforce.
- And finally, I'd like to talk about the future of the Lab.
- Hopefully these topics will expand on what you heard from Terry Wallace when this committee met in Los Alamos in July.

FIRST, FISCAL YEAR 2011 IS NOW COMPLETE.

The Laboratory completed another record year in many areas.

- We completed \$2.6 billion dollars in work for the government and industry—our highest total ever.
- We executed more than \$917 million in procurement—just short of the FY 2010 record.
- Something I want to highlight in our procurements is the emphasis LANL places on doing business in the State and in particular Northern New Mexico.
 - \$528 million of our \$917 million in total procurement stayed in New Mexico. Of that,
 - \$342 million stayed in Northern New Mexico. That represents 38.8% of our procurements.
 - \$453 million in procurements went to small businesses. That's 51%, versus our goal of 46%.
- Something I believe will also create more procurement opportunities and direct economic impact for New Mexico is the recent federal approval for our CMRR project.
 - The Department of Energy issued its Record of Decision on our Chemistry and Metallurgy Research Replacement facility.
 - The Record of Decision means we can go forward with final design of the facility and we have in fact hired a global leader in energy facility design to do that work.
 - The CMRR project will replace an aging facility and allow us to continue doing the analytical chemistry that supports not only our nuclear security missions but also medical applications, environmental analysis, and

energy security.

- Last but not least on CMRR: We have taken occupancy of the first building-- phase one-- of that project—a light lab and office building.
 - The lab spaces are being outfitted and we expect that to be complete in the spring of next year.
 - I encourage you to come up and take a tour of that facility.
- Another major project, especially for subcontracting, continues to be our environmental work.
 - All of our environmental subcontracts have been set-aside for small businesses.
- We completed our third consecutive year of record shipments to WIPP, and all of those shipments have all been completed safely.
- I am proud of what the Lab accomplished this year. And our commitments to New Mexico businesses and small businesses remain strong.

NOW TO YOUR QUESTIONS ABOUT LAB DEMOGRAPHICS.

- As the sixth-largest employer in New Mexico, we directly employ about 11,200 people including subcontractors, students, limited term employees, and postdoctoral researchers.
- 7,600 of them are “career” employees – our permanent workforce.
 - 65% of our career employees are men, 35% are women
 - 59% are white, 35% are Hispanic, 3% are Asian, and 1% are Native American.
 - The figure for Hispanics is up from 28% as of 10 years ago, and I am proud of that improvement.

- In terms of building a diverse workforce, I am the chair of the Lab's Diversity Committee.
 - Diversity is the best way to build a workforce and one of the best ways to attract the world's best talent here.
 - Our goal is to make sure that ALL qualified candidates are considered for open positions.
 - To help build a more diverse workforce, especially in the management ranks, we have enacted a Manager On-Ramp program. To be hired, all new managers must have previous management experience or endorsement of the On-Ramp program.
 - We have a Mentor/Protégé program with 66 protégés in the 2011 program; 59% of participants are women and 35% are ethnic minorities.
 - Our post-doctoral workforce, which is a significant employment pipeline, is also strengthening our diversity.
 - 34 percent are Asian
 - 6.5% are Hispanic – which significantly outperforms the national availability of Hispanics with PhDs, which is 4%
 - 1 percent are Native American, which also outperforms the national availability of Native Americans with PhDs.
 - We, like many R & D institutions, are pursuing a dwindling number of U.S. citizens with technical degrees. More than half of our post-docs are foreign nationals.

YOU ALSO REQUESTED INFORMATION ABOUT THE EDUCATIONAL INSTITUTIONS CONTRIBUTING TO OUR WORKFORCE.

- From an education standpoint:
 - Lab employees hold 13,700 undergraduate and graduate degrees. Understand that many employees hold more than one degree.

- 4,480, or fully one-third, of those degrees are from New Mexico colleges and universities.
- The University of New Mexico leads that field with 1,637 degrees; New Mexico State is second with 883.
- The University of New Mexico also leads in the number of PhDs among Lab employees—ahead of such schools as the University of California, the University of Texas, MIT, and the University of Michigan.
- As a side note, I have appointed a University of New Mexico graduate to be my next deputy lab director.
 - Beth Sellers holds a chemical engineering degree from UNM.
 - She also brings 30 years of management experience at many DOE sites and a wealth of knowledge about managing contracts from our customer's point of view.
 - One of her postings was at the Department of Energy Albuquerque office.
- Her official duties begin December 5th.
- The key here is that New Mexico learning institutions are critical to the health of the Lab. Our partnerships with them, starting in the elementary and middle schools, are working well.
 - In just one example, over the last 4 years LANL has invested \$5 million to develop joint research and educational activities with the New Mexico Consortium—a partnership with the University of New Mexico, New Mexico State, and New Mexico Tech.
- In addition to our educational partnerships, employees and our LANS corporate match donated more than \$522,000 to our scholarship fund.
- In 2011, 72 students were selected to receive scholarships—including 58 recipients from outside Los Alamos County including:
 - 24 recipients from Santa Fe County
 - 13 from Rio Arriba
 - 11 from Taos County
 - 9 from San Miguel County

- 14 recipients came from Los Alamos County.

NOW I'D LIKE TO TURN TO THE FUTURE.

- My top priorities for the Laboratory are to deliver on our commitments to the nation through excellence in science, teaming and collaboration, and creativity and innovation.
- Doing that requires competing for talent on the world stage to attract exceptional scientists, with signature facilities for them to conduct their research.
- In short, it means building an environment that fosters scientific creativity.
- Meanwhile, the President has called on the national laboratories to play an even bigger role in the resurgence of U.S. manufacturing and industry.
 - Quoting from a speech earlier this year at Carnegie Mellon University, he said this will be an “all-hands-on-deck effort between our brightest academic minds, some of our boldest business leaders, and our most dedicated public servants from science and technology agencies, all with one big goal, and that is a renaissance of American manufacturing.”
 - He pointed out that a manufacturing process computer simulation code from Los Alamos has saved Proctor and Gamble \$500 million, and now P&G is sharing that code with its suppliers.
- In addition to our new analytical chemistry facility, we plan to make further investments along our main R & D corridor.
 - In just one example, a Northern New Mexico company is designing our new transuranic waste facility.
 - Our work to revitalize our Plutonium Facility continues,
 - And our security upgrades in that area are under way.
- Our budget for Fiscal Year 2012 has not been finalized. We are in a continuing resolution and we expect our budget will be down about \$200 million this year—at about \$2.5 billion.

- As you know, the nation is facing a new budget reality.
- I am optimistic that we will NOT have any impacts to our permanent workforce in FY12
- The key word for now is “uncertainty.”

- I’d like to wrap up by talking about a very dramatic example of progress. It’s dear to my heart because my mother was a schoolteacher and my dad would teach me calculus while we hiked together.
 - Over the last two years, the Lab donated has \$171,000 from its incentive fee to the Northern New Mexico Inquiry Science Education Consortium.
 - The Consortium leveraged that money to purchase science kits for more than 6,000 third and fourth-graders.

- After just four months, science scores were up 39% for third-graders and 37% for fourth-graders. This is very encouraging!

- In summary:
 - The Laboratory continues to deliver on our national security commitments for the nation.
 - We are a trusted source for technical information on nuclear deterrence and stockpile stewardship.
 - For the longer term, we will closely observe the important discussions going on now in Washington on government spending.
 - I pledge to keep you informed of any developments that will affect the Laboratory.

- I thank you for the opportunity to speak to you today and I would be happy to answer your questions.